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# SURFACE ACCESS TO WEST BERLIN



#### INTELLIGENCE AGENCY CENTRAL

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## SURFACE ACCESS TO WEST BERLIN

Road, rail, and water connections with the German Federal Republic are vital lifelines of West Berlin. Because of its physical isolation from West Germany and its political isolation from East Germany, West Berlin must rely on these surface communication lines for most of its supplies and as outlets for its products. The Western armed forces, which maintain the freedom of West Berlin, are reinforced and resupplied mainly by means of these arteries. Western rights of access to Berlin by way of surface routes rest on a series of formal and informal agreements -- some of them couched in general terms -- made in the years following World War II and in 1949, after the attempted Soviet blockade of the city. In addition, certain practices have been instituted unilaterally from time to time by one or more of the Western Allies or by the Soviet Union. Thus, although the principle of Western access established by President Truman in a letter to Marshal Stalin on 14 June 1945 has been clearly recognized by the Soviet Union, current practice regarding surface access to the city is the result of gradual, unplanned growth, much of it having no clearly defined documentary reference; and many of the conditions are subject to conflicting interpretations. The traffic with West Berlin is confined to relatively few, heavily traveled routes that present numerous possibilities for harassment or interdiction.

The primary dependence of West Berlin on the Federal Republic for its trade with the outside world is illustrated by a comparison of the 1961 figures for traffic with West Germany and East Germany. In 1961, West Berlin received 7,915,797 metric tons\* of goods from the Federal Republic and 1,928,826 tons from East Germany. It sent 1,838,492 tons to the Federal Republic and 9,190 tons to East Germany. Of the imports from the Federal Republic in 1961, roughly equal amounts were transported by road and by inland waterway and a somewhat smaller amount by rail. The tonnage shipped by air was negligible, although the nature of the goods makes this means of transportation important. The items imported fall into 45 statistical categories, 6 of which (coal, stones and earth, food products, POL, primary agricultural products, and iron and steel) accounted for more than 79 percent of the incoming tonnages in 1961. The following table gives the 1961 imports into West Berlin from the Federal Republic and East Germany by type of goods and, for the Federal Republic, by type of transportation.

West Berlin Imports by Surface Transport 1961  $\underline{\mathbf{a}}/$ 

Commodities	From	From Federal Republic						
	East Germany (Metric Tons)	Total (Metric Tons)	Rail		Road		Water	
			Metric Tons	Percent	Metric Tons	Percent	Metric Tons	Percent
Major categories								
Coal	879,510	2,505,111	1,403,989	56.0	1,601	Negl.	1,099,521	43.8
Stones and earth	850,659	1,323,401	107,747	8.1	534,379	40.3	681,275	51.4
Food products	61,452	765,472	22,168	2.8	696,288	90.9	47,016	6.1
Agricultural products	3,127	531,989	320,169	60.1	136,366	25.6	75,454	14.1
POL	49,743	714,149	61,939	8.6	101,438	14.2	550,772	77.1
Iron and steel	52	423,663	48,109	11.3	194,325	45.8	181,229	42.7
Total	1,844,543	6,263,785	1,964,121	31.36	1,664,397	26.56	2,635,267	42.08
All categories	1,928,826	7,915,797	2,265,606	28.63	2,861,467	36.15	2,787,321	35.22

a. Air imports totaled only 1,403 metric tons in 1961.

<sup>\*</sup> Metric tons are used throughout this memorandum.



The basic decision concerning rail and highway routes to Berlin was made at the 29 June 1945 conference between Marshal Zhukov, General Clay, General Weeks and their subordinates. The documentary details concerning rail traffic to Berlin are given in the report of the Directorate of Transport, Allied Control Authority, CORC/P(45)30, approved under CONL/M(45)5. This document, among other things, established the Helmstedt-Magdeburg-Berlin route for inbound freight and the Berlin-Oebisfelde-Vorsfelde route for the return movement of empties. This portion of the document remains in force. Other portions have been superseded by later arrangements, established without formal or written agreements. Because these arrangements were in effect before 1 March 1948, the Soviet authorities are obligated to maintain them under the terms of the Agreement on Lifting the Blockade, New York, May 4, 1949. These informal arrangements provided for:

- (1) Military passenger trains as follows -- two American trains nightly in each direction between Berlin and West Germany; one British train nightly and one by day, when required, in each direction; two French trains weekly in each direction; and five additional trains per week at night, if required.
- (2) Thirteen eastbound freight trains.
- (3) One German civil passenger train daily in each direction.
- (4) Special trains as required for important persons (High Commissioners, Commanders-in-Chief, etc.).

Although these arrangements were accepted in the course of quadripartite discussions after the blockade, no agreed record of the conversations is known to exist.

Additional agreements have been made since 1949 between officials of the East German Reichsbahn and the West German Bundesbahn, which provide for the operation of 10 German passenger trains daily in each direction between Berlin and West Germany. Except for the inclusion among them of the one German passenger train covered by the New York agreement, these are merely agreements between German officials and are not part of the Four Power Agreements. The German passenger trains start and terminate at either Ostbahnhof or Friedrichstrasse Station in East Berlin (all stopping at the latter), but they stop at the Zoo Station in the British Sector to pick up and discharge passengers. In addition to the trains listed, international passenger trains transit Berlin, but they are not considered here.

The Reichsbahn-Bundesbahn agreements also: (1) extended the types of freight authorized for rail transport to include all freight correctly documented; (2) provided for the operation of westbound freight trains, within limits never yet specified\*; and (3) called for the running of mail trains in both directions, which for eastbound trains would be offset against the total of 13 freight paths available daily.

Prior to March 1948, through informal arrangement, an additional two or three freight trains were operated daily, when required, from West Germany to West Berlin using routes other than the Helmstedt route, principally via Oebisfelde and Büchen. After the lifting of the blockade, the Soviet authorities were pressed to restore these facilities inasmuch as the Western Allies considered the USSR to be obligated to do so under the terms of the New York agreement. This the USSR refused to do under the pretext that the use of the routes had been a concession that it was not bound to honor under existing agreements. No new agreement was reached, and the position has remained unchanged.

<sup>\*</sup> It is believed that 13 freight trains from Berlin to the West are available daily; in practice the demands rarely require the use of more than 4 or 5, and the Western Allies do not have the prescriptive right to demand that all 13 trains should be made available to them.

In the pre-blockade period, German locomotives from the British and American Zones pulled the trains over the entire distance. Upon the resumption of rail movements after the blockade, the Soviet authorities insisted that the East German Reichsbahn provide the locomotives and personnel for the trains on the Helmstedt-Berlin run. Although the Western Allies objected to this change, it subsequently became the accepted practice to have all military trains pulled through the Soviet Zone by Reichsbahn locomotives -- with the exception of occasional special Diesel trains operated by West German Bundesbahn personnel for the US Forces.

Goods transported by rail other than on military-duty trains must be documented by an Interzonal Trade Permit (Warenbegleitschein: WBS) and a Freight Warrant (Frachtbrief). The Interzonal Trade Permit has been the sine qua non for all shipments to or from Berlin since it was put into effect on 1 October 1947. The requirement for endorsing the WBS was transferred from the Soviet to the East German customs office in 1953 and was dropped completely in January 1961. Rail shipments of parcel post packages up to 20 kilograms (42.1 lbs.) in weight comprise an important exception to the universal requirement that all shipments be documented by a WBS.

All military rail traffic and all civil rail freight from the Federal Republic to West Berlin is channeled through the Helmstedt-Marienborn crossing point and enters West Berlin via Griebnitzsee near Potsdam. The line is double track for 24 miles from Marienborn to Biederitz (Magdeburg), single track for 72 miles from Biederitz to Wildpark (Potsdam), and double track for 20 miles from Wildpark to Ostkreuz (Berlin). Westbound freight trains, which average one per day, have not been limited by any agreement. Empty freight cars from West Berlin are routed back to the Federal Republic via Stendal and Oebisfelde-Vorsfelde.

Civil rail passenger traffic is authorized at any of the following crossing points: Büchen-Schwanheide, Helmstedt-Marienborn, Bebra-Wartha, Ludwigslust-Probstzella, Hof-Gutenfürst, and Lübeck-Herrnburg. Controls on civilian rail passengers are the same as for civilian highway travelers and are discussed below.

Rail shipments consist mainly of heavy bulk goods, but items from all of the 45 categories of freight mentioned above are represented. More coal, primary agricultural products, and inorganic chemicals are usually transported by rail than by water or road. In 1961, coal tonnages accounted for about 61.9 percent of the total rail traffic. Primary agricultural products accounted for about 14.1 percent. The remaining 24 percent is widely distributed. In 1961, 56 percent of the coal and 60 percent of the agricultural products shipped from the Federal Republic moved by rail.

### Highway

The basic decisions regarding road connections between Berlin and the Western Zones of Occupation were made at the June 1945 conference between Marshal Zhukov, General Clay, and General Weeks referred to above. This agreement was never formalized, each party having made his own notes, but the lines of agreement became established by daily usage and practice. The Western Powers had requested two highways: Berlin-Halle-Eisenach-Kassel and Berlin-Magdeburg-Braunschweig; but at this meeting it was agreed to accept the Berlin-Magdeburg-Helmstedt-Braunschweig autobahn for use by both British and American forces, with the understanding that the question could be reopened at a meeting of the Control Council in the event that the use of only one road was not satisfactory. The United States and United Kingdom did not request exclusive use of any roads but stressed the need for rights of access and movement without restrictions. The Soviet representative stated that vehicles would necessarily be governed by Soviet road signs and be subject to document checking by the Soviet military police but not to inspection of cargoes. This was agreed to by all three powers represented.

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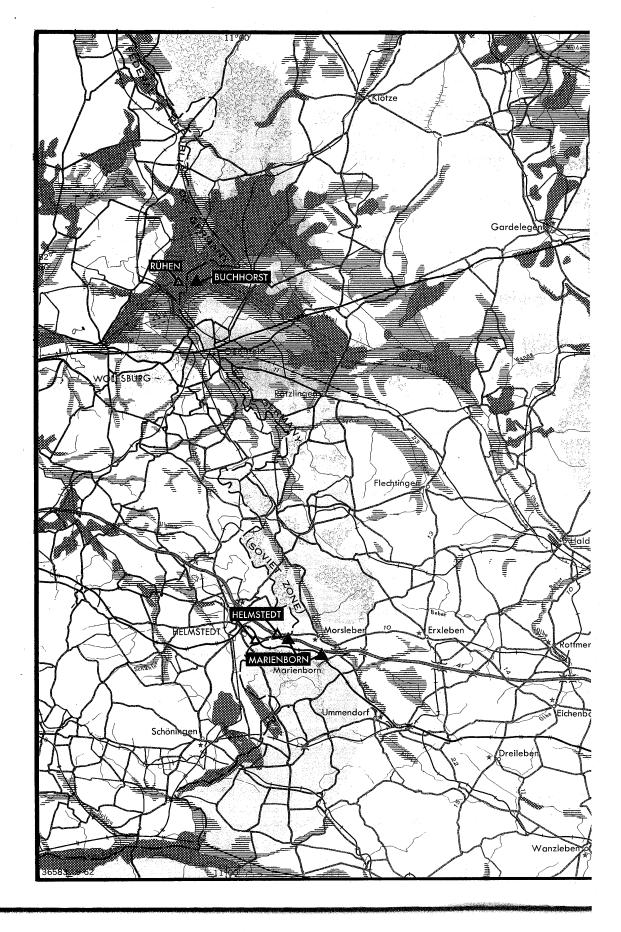
The Herleshausen-Wartha and Töpen-Juchhöh autobahns as well as the Helmstedt-Marienborn autobahn may be used for civil traffic. All three autobahns meet near Babelsberg, just outside Berlin. One additional route to West Berlin is available to civilians, Highway 5 from Hamburg, which crosses the border near Horst and enters West Berlin at Staaken.

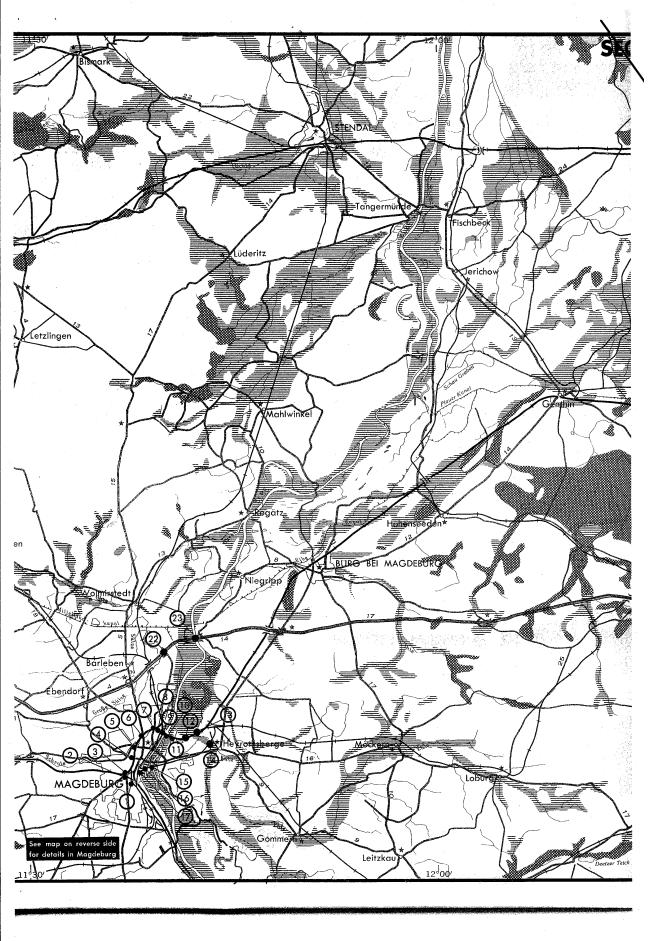
Two basic types of documentation for Allied surface movements were established by quadripartite arrangements in 1957-58: (1) individual movement orders -- the so-called "flag" orders -- and (2) convoy-movement orders. Such arrangements, however, were ambiguous in defining the use of orders for certain types of single, passenger-carrying military vehicles; and, as a result, practices are not uniform. For example, single military buses and jeeps of UK origin use flag orders but those of US origin use convoy orders; the French use flag orders for single jeeps but convoy orders for single military buses.

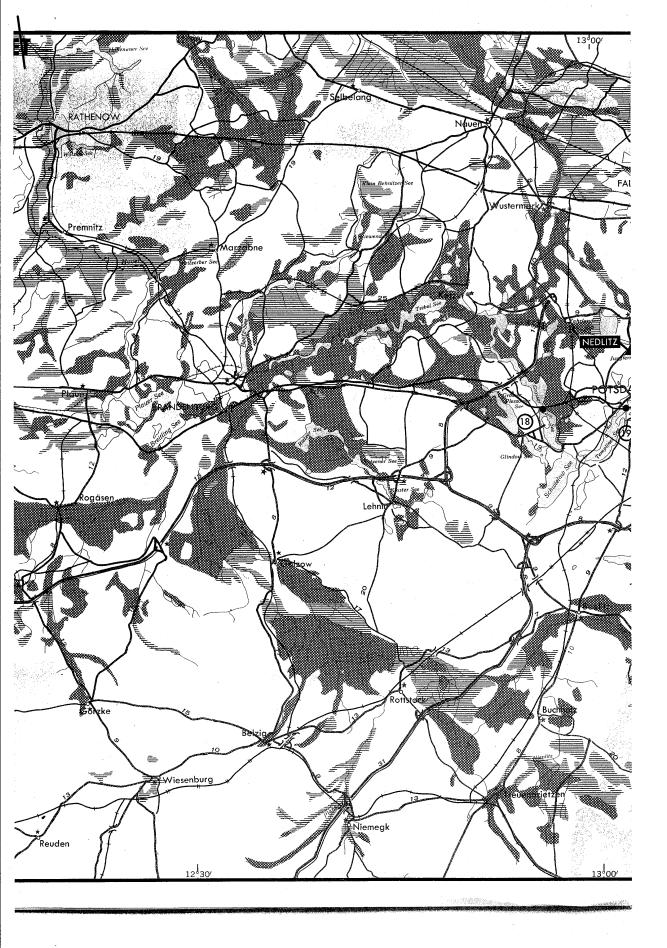
There are no written quadripartite checkpoint procedures for convoys. The Allies, however, have attempted to reach ad hoc agreements on procedural issues raised by the Soviet authorities. Recent Soviet harassments have revolved around three subjects -- advance notification, dismounting and headcount, and inspection of vehicles. The practice of "advance notification" as used in the current harassments dates from the movement of the first battle group up the autobahn in August 1961, when the United States gave advance notification of the arrival of this convoy on the specific understanding that this was a unilateral and voluntary US action of purely administrative nature to facilitate the processing and forward movement of our convoy. In general, the United States has continued to give advance oral notification (15-30 minutes for small convoys and as much as 6 hours for large movements) of arrival of US convoys at the Soviet checkpoint when, in the judgment of US authorities (because of the size of convoy, number of personnel, or time of the day), such notification is likely to facilitate processing. The United States does not issue notification for convoys of less than 8 vehicles. The USSR contends that advance notification of convoys has now become an established procedure and has been trying to impose a requirement for advance notification on all US convoys. The British generally give oral notification the day before departure for convoys of three or more vehicles; since April 1962, however, they have refrained from dispatching convoys with three to seven vehicles in order not to undercut the US position. So far as is known, the USSR has not raised the question of advance notification with the French.

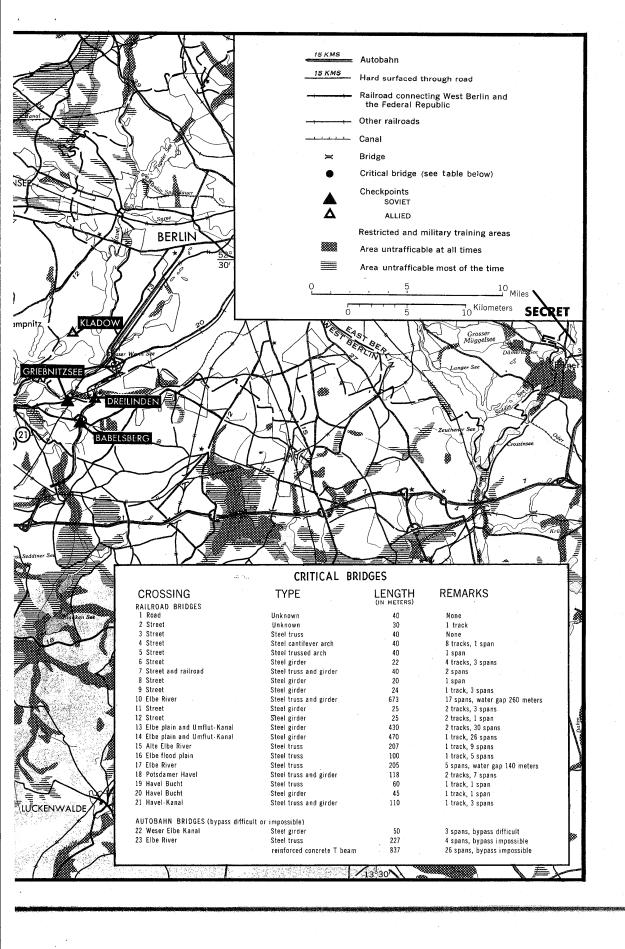
The convoy-movement order lists the total number of officers, noncommissioned officers, and enlisted men with the convoy. The Soviet authorities verify these totals by counting the personnel. Periodic Soviet attempts to require dismounting have been rejected. Dismounting is practiced on US and UK troop-carrying convoys provided that: (1) orders to dismount and to line up for the headcount are given by the convoy commander and not the Soviet officers, (2) the time required be limited to about 5 minutes (never more than 10 minutes), and (3) the dismounted troops will not be subjected to propaganda broadcasts, leaflet distribution, etc. If drivers and assistant drivers are the only personnel of US and UK convoys, they customarily do not dismount, and dismounting is never performed in inclement weather or when the number of troops is small enough to be counted readily in the vehicles involved (such as buses). Occupants of all French vehicles are forbidden to comply with Soviet demands to dismount.

Soviet authorities have made spasmodic attempts over the years to establish the right to enter or to mount Allied vehicles in order to inspect the interior. The Allies have never conceded to Soviet authorities the right of inspection, but by tripartite policy they refrain from using closed vehicles so that the Soviet authorities may, if they wish, view the interior. Soviet attempts to enter or mount vehicles for inspection continue to be rejected. The United States refuses to lower tailgates to improve visibility of the interior, but the British do lower tailgates, which are higher than the American and do in fact impede the view of the interior. The French have rejected the occasional Soviet attempts to inspect the interior of their vehicles.









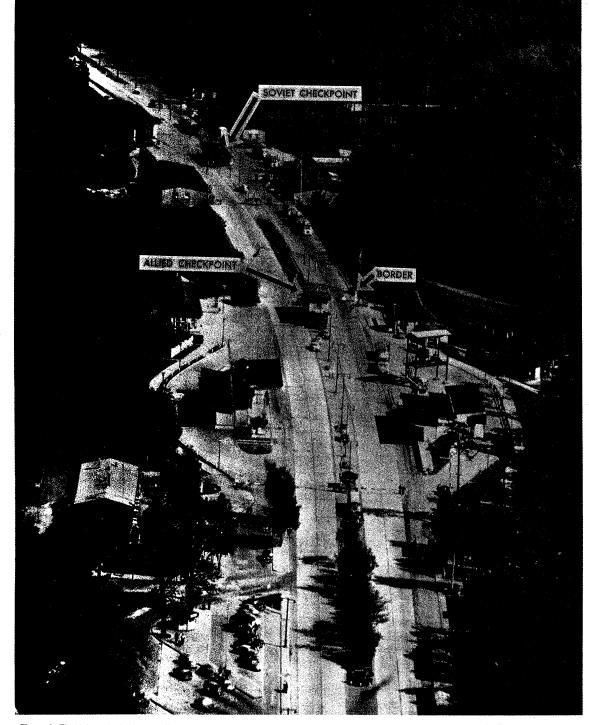


Figure 1. The Helmstedt checkpoint. The flags in the center mark the East German-West German border. All eastbound travelers report at the Allied checkpoint before proceeding to the Soviet/East German control points. Western authorities check documents and try to eliminate any potential sources of trouble with Soviet/East German authorities.

Persons other than Western Allied military or official personnel wishing to travel or to ship goods into West Berlin by highway (or by rail) must deal with East German representatives, not with Soviet representatives, and are subject to East German passport and customs controls.

West Germans residing in the Federal Republic and West Berliners are asked to

visas have been required unless the persons were going on to or returning from another country, but most West Germans have been showing their Federal Identity Cards (Bundespersonalausweisen). West Berliners present the provisional Berlin Personal Identity Cards (behelfsmässigen Berlin Personalausweisen). Non-Germans and West Germans using Federal Republic passports showing permanent residence abroad are required to obtain visas from East German officials. These controls effectively provide the East Germans with power to determine who and what may enter East Germany, even if only for transit to West Berlin. The East Germans also exercise police power over non-Allied personnel along the highways. There were, for example, 144 known arrests or detentions of varying duration on the interzonal highways in 1960 and again in 1961.

In addition to his own personal identification the driver of a motor vehicle must have an Interzonal Trade Permit (Warenbegleitschein: WBS) for the vehicle itself because motor vehicles are on the Allied Restricted List (Vorbehaltsliste). In the case of vehicles leaving Berlin permanently, not only the original Interzonal Trade Permit but also an Interzonal Trade Permit issued in West Berlin has been required. As late as August 1958, some vehicles -- including some owned by American civilians -- were confiscated under this regulation. A bus driver, in addition, must submit a list of bus passengers when he crosses the demarcation line. A passage permit (Laufzettel) is then issued by the East German authorities without charge for each motor vehicle, regardless of the number of passengers. The Laufzettel contains personal data about the travelers, the amount of money and other valuables they are carrying, and the registration number of the motor vehicle. The document is surrendered upon leaving East Germany. A truck must have, in addition to the essential Interzonal Trade Permit, bills of lading and, if necessary, a load list. East German officials frequently inspect these documents, and difficulties may arise if they do not agree with the Interzonal Trade Permit. East German officials also have been known to examine the drivers Trip Book (Fahrtenbuch) and other records.

Over the years the actual practice of East German officials has been inconsistent, and their procedures have varied both from time to time and from place to place. Thus, certain control points have a reputation of being stricter than others. Not only have individual control personnel acted arbitrarily, but procedures also have been changed radically with little or no advance notice or apparent justification. Such changes seem, in retrospect, to be attuned to over-all East German-Soviet policy vis-à-vis Berlin. The sharp increase in autobahn tolls on 1 April 1955 and a campaign against the conveyance of alleged war production in the fall of 1960 are examples of such tactics.

Failures to satisfy the customs officials may result in long delays, degrading interrogations, fines, or even confiscation of merchandise. Confiscations, however, have been very infrequent in recent years and fines generally have been modest in terms of the limits permissible under pertinent East German legislation.

For vehicles traveling between Berlin and the Federal Republic a "contribution to the upkeep of the roads" must be paid, the amount depending upon how far they travel. The proceeds from these taxes are considerable, as can be gauged from traffic figures for 1961, when 1,354,309 vehicles used the highways between Berlin and the Federal Republic.

Practically all the 45 categories of freight are represented in the Federal Republic-West Berlin truck traffic. In 1961, despite this diversity, most road shipments from the Federal Republic fell into 5 categories: paper products, primary agricultural products, iron and steel, stones and earth, and food products.

In 1960, some 185,290 inbound trucks carried 2.9 million tons, an average load of 15.7 tons per truck. Assuming a 6-day week, this was an average of nearly 600 trucks per day. About 60 percent of the trucks are licensed in West Berlin.

#### Inland Waterways

West Berlin is connected with the Federal Republic by two inland waterways. A system of canals links West Berlin with the Elbe between Havelburg and Magdeburg. Barges can then either ply the Elbe River all the way to Hamburg or they can transfer to the Mittellandkanal, which connects with the Ruhr waterways.

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Figure 2. The Babelsberg checkpoint, a potential bottleneck just north of the Drewitz interchange southwest of Berlin. Barriers reduce the usable road width to one lane by forcing all vehicles into the center lane before entering the "Plaza." Thereafter, passenger vehicles normally take the left lane and trucks the right. The Allied checkpoint is about a mile north, near the Teltow Kanal.

Although an Inland Waterways Committee and the Terms of Reference for this committee had been set up in 1945, it was not until 1946 that a documentary basis was established for inland water transport. A Quadripartite Coordinating Committee decision of 16 May 1946 laid down the principles to be embodied in bilateral interzonal agreements (CORC/P(46) 59-Final). In June 1946, an Anglo-Soviet agreement established the organizations and conditions of operating inland water transport between the British and Soviet Zones. The British occupation authorities entered into this agreement with the Soviet authorities only because the British Zone had commercial inland waterway connections. Throughout these documents reference is made only to the vessels of the respective zones and to navigation between zones. No direct reference is made in these agreements to navigation between West Germany and West Berlin nor to West Berlin vessels. Any rights pertaining to inland water transport between the Federal Republic and West Berlin derive from practice prior to 1 March 1948 -- the continuance of which was assured by the New York agreement of 1949 -- or by arrangements which postdate the blockade. The Anglo-Soviet Agreement of May 1951 and subsequent renewals recognized the use of West Berlin barges by specifying that they would pay lock dues at the British Sector locks in Westmarks, but the agreement did not delimit other areas in which the barges would operate. These documents also provide written recognition of the fact that West Berlin waterways, with the exception of the Teltow Kanal and the Neukölln-Britzer Kanal, are operated by the East German authorities under Soviet control in much the same way as are the West Berlin railroads and for the same reasons -- because the railroads and waterways of all Berlin, before its division into sectors and its separaministration. Because the Fotsdam Agreement called for the establishment of a central German Transport Administration, it was then considered contrary to the agreement to split the existing organization and to establish separate sector administrations. In practice the East German waterways administration operates the locks and collects fees for their use; and the West Berlin Senat, through the police, exercises control in West Berlin over most aspects of waterway operation and administration other than the operation and maintenance of the locks themselves.

To an even greater extent than rail transport, barges carry bulk goods. Of the 45 statistical categories, 4 categories -- coal, stones and earth, POL, and iron and steel -- comprise more than 90 percent of the tonnages. Normal transit time from Hamburg is 2 or 3 days for self-propelled barges and 4 or 5 days for towed barges. From the Ruhr the corresponding figures are 6 to 8 days and 12 to 14 days, respectively.

Although not the greatest in tonnage, POL is the most important product hauled. In 1960, about 77 percent of the POL imported from the Federal Republic came by barge, compared with 15 percent by truck and about 9 percent by rail. Barges also are leading carriers of nonferrous metals, rubber products, and asbestos products. The British military forces bring coal in by barge; the United States uses trains.

In 1960, for the first year since the war, barges actually led rail and highway vehicles as inbound carrier, with 36 percent of the total tonnage. The average load was 340 tons. Traffic via the Elbe from Hamburg included 2,981 barges, whereas that on the Mittellandkanal amounted to 5,801 barges, chiefly from the Ruhr. Practically all of the barges were of Federal Republic registry.

Since 26 June 1946, each barge operator is required to show to the competent control authorities at the checkpoints -- Schnakenburg-Kumlosen, Rühen-Buchhorst and Kladow-Nedlitz the following documents:

- (1) A temporary navigation permit (<u>provisonischer Fahrter-laubnisschein</u>).
- (2) A crew list (Mannschaftsliste).
- (3) A valid Personalausweis for each crew member.
- (4) For cargo-carrying vessels, the customary inland shipping documentation (a bill of lading, either a  $\underline{Frachtbrief}$  or a  $\underline{Lodeschein}$ ).
- (5) A goods-movement permit (the WBS satisfies this requirement).
- (6) Any documentation required by water police regulations.

### Harrassment Problems

A variety of forms of harassment can be applied by the Soviet authorities to each means of surface transport without the outright denial of access. Harassment of military rail traffic generally has been attributable to operational problems of the East German Reichsbahn related to personnel and equipment difficulties. In addition, however, politically motivated procedures also have been intercalated. The introduction in mid-September 1961 of Potsdam as the point for changing engines, for example, has been a major cause of delay; undoubtedly this innovation was designed primarily to prevent the escape of Reichsbahn employees to West Berlin.

By its control of the locomotives, tracks, signals, switches, and other necessary components of the rail system the Reichsbahn has plenty of opportunity to interfere with or stop traffic. An accident, rail break, bridge failure, or other technical difficulty would provide a reasonable excuse for blocking traffic on the single-track line should this be considered politically desirable. Insistence upon rail access thus might make necessary the supplying of standby maintenance and repair capabilities or the use of alternate routings over Reichsbahn facilities, a procedure for which there is no specific agreement. Civil passenger traffic, governed only by German agreements, is especially susceptible to harassment.



The large number of vehicles passing through the highway checkpoints each day suggests the simplest method of harassment of highway traffic. By slowing down the processing of documents, the East Germans can increase the length of the line waiting for document processing and drastically reduce the amount of highway traffic. The barriers and slalom-type obstacles also contribute to slow movement. The congestion caused by the back-up of civilian traffic can be utilized to advantage by the Soviet-East German authorities to blur the distinction between civilian and military traffic. Such congestion also provides an ostensible basis for demanding advance notification of the arrival of military transport.\*

Under normal conditions the Babelsberg checkpoint handles more traffic than all other border crossing points together and is therefore the greatest potential bottleneck. In 1960, 61.8 percent of the trucks enroute to Berlin entered via Helmstedt, 14.9 percent via Töpen, and 3 percent via Herleshausen, thus making a total of nearly 80 percent that passed through the Babelsberg checkpoint. Another 20.2 percent of the trucks entered via Lauenberg, and 0.1 percent via Lübeck-Schlutup.

Surface traffic is also vulnerable to Communist claims that the bridges and the autobahn had been damaged by the increased Allied traffic and had to be closed for repairs. The "need for repairs" was the ostensible reason for closing the autobahn bridge over the Elbe at the time of the blockade. In such cases the potentially most troublesome points along the autobahn are bridges that cannot easily be bypassed, the most critical of which is still the Elbe River bridge (see maps). Most of the other critical bridges are between Magdeburg and Berlin. Still other bridges and overpasses would, if destroyed, slow down traffic and cause inconvenience; but they could, nevertheless, be bypassed fairly easily.

Hard-surfaced, all-weather secondary roads are numerous and in many cases would provide alternatives with relatively short detours if bridges or sections of the autobahn were closed. Closure of the Elbe River bridge, on the other hand, would entail a considerable detour via Magdeburg (see small map, Magdeburg area). The use of such a detour might raise Soviet and East German objections because the traffic would have to pass through the city, but there are no practical alternatives. The nearest other bridges are at Schönebeck about 11 kilometers to the south and Tangermünde 40 kilometers to the north; ferries, although numerous, could not handle the necessary volume of traffic.

Military training grounds occupy considerable land on both sides of the autobahn. Passage through these restricted areas is prohibited to all but specifically authorized persons. Therefore, closure of a portion of the autobahn bounded by military training areas would raise the question as to whether to detour around the military areas or take a shorter route through them.

Between Berlin and the Elbe, there are fairly extensive areas where cross-country detours would be impractical most of the time because of soil type, moisture conditions, or degree of slope. In still other places the forests, which cover about 25 percent of the area, restrict cross-country movement in areas where it otherwise would be practical (see map). Closure of the autobahn for repairs in such places would make long detours necessary; and, if accompanied by closure of some secondary routes, the situation could become critical and would raise the issue of using other routes, including other autobahn routes, for which there is no specific agreement.

If road traffic alone were harassed, it is possible that the railroads might be able to handle much of the halted traffic. Although the basic rail access agreements provide for a daily maximum of 13 freight trains to Berlin from the Federal Republic, not all of these trains have been used in the past. Furthermore the controlling agreements place no limits on the length or capacity of the trains. Obviously, however, the conditions of the roadbed and equipment impose technical limitations upon the capacity of the railroads. At one time, the technical limit on the size of the trains was stated to be 60 cars (120 axles) or a gross tonnage of 1,200 tons, including the weight of the freight cars.

The statistics for September 1961, a busy month, illustrate the extent of unused railroad capacity. A total of 336 trains comprising 11,680 cars carried 196,122

ported. Thus an additional tonnage roughly equivalent to half the present tonnage could be transported by rail if all 13 train paths were fully utilized. In 1961, an additional 1,132,000 tons of freight probably could have been moved by rail. This estimate, however, assumes that the trains would be expeditiously handled by the Reichsbahn, which is far from certain.

Conversely, the theoretical capacity of highways to absorb rail traffic, if it were harassed, is much more limited. The major factor in determining the amount of goods that could be hauled by road is the rate of processing at the checkpoints. If the number of trucks needed could be obtained, which in itself would raise another set of problems, all of the trucks would still have to be processed through the checkpoints. In 1959 and 1960 an average of about 507 trucks per day were cleared. Although it is true that about 1,400 cars and 75 buses also were processed daily, it is unlikely that the Soviet or East German authorities would continue to cooperate to that extent with road traffic while harassing rail traffic. It has been estimated that the fastest processing that probably could be expected is 2 minutes per truck, or a daily rate of 720 trucks. At an average capacity of 10 tons\*\* each, this would amount to 2,628,000 tons annually, which is less than has been carried by road in recent years.

Inland waterway traffic is especially vulnerable to Soviet maneuvering, although the importance of the port of Hamburg and the Elbe waterway to Czechoslovakian and East German trade tends to counterbalance this vulnerability. Traffic can be halted easily by closing a lock or portion of the waterway for repairs. Rerouting alternatives are limited. Nature, itself, sometimes limits operations -- by low water in summer and ice in winter. Most of the barges and tugs involved in the Federal Republic-West Berlin traffic are of West German registry and are privately owned. In the event that all but military traffic were stopped, it probably would be extremely difficult to establish military contractual arrangements to cover all water transport. Such arrangements would also have to cover the operators because no US, UK, or French military personnel are qualified to operate barges on these waterways.

The conditions of surface access to West Berlin are complex and offer many opportunities for the Soviet Union to erode Allied morale and increase the difficulties of the Western Allies in fulfilling their obligations to administer and provision West Berlin. The signing of a peace treaty between East Germany and the USSR would further complicate the procedural aspects of surface access to Berlin and provide new opportunities for harassment. Although East Germany ostensibly would be in charge, the USSR would have the ultimate responsibility and, no doubt, would lay down the ground rules for East German actions.

<sup>\*</sup> On one occasion, civilian traffic waiting to be processed at a checkpoint occupied the right lane, in which military traffic normally parks, and military convoys then parked on the center strip. The Soviet authorities said they would have cleared parking space in the right lane for the military traffic if they had had advance notification. They also indicated that they would refuse to process other military vehicles that were not parked in the right lane.

\*\* Although truck loads in recent years have averaged about 16 tons, it is doubtful that this average could be attained under the circumstances envisaged because about 40 percent of the civilian trucks used are registered in the Federal Republic and probably could not be utilized.

